

20020915.qrp v02\_n679.qrl.20020915

Date: Sun, 15 Sep 2002 19:03:05 EDT  
From: qrp-l@Lehigh.EDU  
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>  
Subject: QRP-L digest 2679

QRP-L Digest 2679

Topics covered in this issue include:

- 1) [135048] Mag Loops  
by J.Bennett@lboro.ac.uk
- 2) [135049] Re: Who does have the most stable vfo design?  
by Dan Halbert <halbert@bbn.com>
- 3) [135050] Re: Software Upgrades for Radios  
by Michael Babineau <michael.babineau@sympatico.ca>
- 4) [135051] Stabel VFO's  
by "Doug Hendricks" <ki6ds@dospalos.org>
- 5) [135052] Re: K2 sn313  
by "Steve/n0tu" <n0tu@codenet.net>
- 6) [135053] Re: Galena doesn't work!  
by "W3CDE Jerry L." <w3cde@bellsouth.net>
- 7) [135054] RE: Who does have the most stable vfo design?  
by John Seboldt <k0jd-l@seboldt.net>
- 8) [135055] WTB: 4-6 Gig IDE HD  
by "Rob Matherly" <w0jrm@arrl.net>
- 9) [135056] QRP to the woods... (kinda long and probably pointless)  
by "Dave Ek" <ekdave@earthlink.net>
- 10) [135057] Serial CW Sender noise issues  
by "Dave Ek" <ekdave@earthlink.net>
- 11) [135058] Needed: Norcal 40 schematic  
by "J. W. (Dub) Thornton" <dub@oklahoma.net>
- 12) [135059] Re: QRP to the woods... (kinda long and probably pointless)  
by "Trevor Jacobs" <kg6cyn@earthlink.net>
- 13) [135060] Crystals, Q, R and Greek Orthodoxy  
by "Brad Hernlem" <alihernlem@hotmail.com>
- 14) [135061] Re: Galena doesn't work!  
by "Leon Heller" <leon\_heller@hotmail.com>
- 15) [135062] Re: QRP to the woods... (kinda long and probably pointless)  
by "Per-Arne Asp" <per-arne.asp@tordata.se>
- 16) [135063] Re: Who does have the most stable vfo design?  
by "Leon Heller" <leon\_heller@hotmail.com>
- 17) [135064] Re: Crystals, Q, R and Greek Orthodoxy  
by "Leon Heller" <leon\_heller@hotmail.com>
- 18) [135065] THREE pair(s) of reading glasses and a tiny strip of electrical tape...  
by "Bill, N4QA" <n4qa@hotmail.com>

- 19) [135066] Single letter beacons  
by John R Kirby <n3aaz-qrp@juno.com>
- 20) [135067] Re: QRP to the woods...  
by John R Kirby <n3aaz-qrp@juno.com>
- 21) [135068] 'Undocumented' Rock-Mite ass'y steps which should be avoided!  
by "Bill, N4QA" <n4qa@hotmail.com>
- 22) [135069] AD8302 (network analyser on a chip)  
by "Leon Heller" <leon\_heller@hotmail.com>
- 23) [135070] Re: Who does have the most stable vfo design?  
by wb0wao@hotmail.com (Dennis Ponsness)
- 24) [135071] Re: Serial CW Sender noise issues  
by David Hinerman <WD8CIV@worldnet.att.net>
- 25) [135072] Re: Crystals, Q, R and Greek Orthodoxy  
by "Lee Mairs" <lmairs@cox.net>
- 26) [135073] RE: QRP to the woods... (kinda long and probably pointless)  
by Nick Kennedy <nkennedy@tcainternet.com>
- 27) [135074] Re: 'Undocumented' Rock-Mite ass'y steps which should be avoided!  
by "Brian" <brian@iquiest.net>
- 28) [135075] RE: Crystals, Q, R and Greek Orthodoxy  
by Nick Kennedy <nkennedy@tcainternet.com>
- 29) [135076] Re: Serial CW Sender noise issues  
by "Dave Ek" <ekdave@earthlink.net>
- 30) [135077] Hooray! New rig comes to life; takes bite out of the ether ...  
by Nick Kennedy <nkennedy@tcainternet.com>
- 31) [135078] OT: Poem From QST 1917  
by "Tom Curtola" <tcurtola@rogers.com>
- 32) [135079] Galena doesn't work!  
by "David B. Sarraf" <david.sarraf@paonline.com>
- 33) [135080] RE: Who does have the most stable vfo design?  
by Harry Hurst <wa3ptg@comcast.net>
- 34) [135081] OT:IRLP  
by "Trevor Jacobs" <kg6cyn@earthlink.net>
- 35) [135082] RE: Who does have the most stable vfo design?  
by Nick Kennedy <nkennedy@tcainternet.com>
- 36) [135083] Re: AD8302 (network analyser on a chip)  
by "Dave Martin" <k2zu@seanet.com>
- 37) [135084] Etchant Resist  
by wo7t@juno.com
- 38) [135085] Re: Etchant Resist  
by "John J. McDonough" <wb8rcr@arrl.net>
- 39) [135086] Cleveland...er, I mean, Rock-Mite ROCKS! A day in the life (LONG)  
by "Bill, N4QA" <n4qa@hotmail.com>
- 40) [135087] LTC1799 VFO wave file  
by jacksonharbor@att.net
- 41) [135088] Re: Etchant Resist  
by "Tim, N9PUZ" <n9puz@arrl.net>
- 42) [135089] RE: Etchant Resist  
by Nick Kennedy <nkennedy@tcainternet.com>

- 43) [135090] Re: Galena doesn't work!  
by Tom Mc <tjmc@erols.com>  
44) [135091] QRP Afield - Clarification of Multi-Club Station rule.  
by Chuck Ludinsky <cjl@mitre.org>  
45) [135092] Re: QRP Afield - Clarification of Multi-Club Station rule.  
by Paul Womble <pwomble1@tampabay.rr.com>  
46) [135093] RE: [Elecraft] Bag for K1  
by "Bob Mason" <skydive@runswithscissors.us>

-----  
Date: Sun, 15 Sep 2002 00:18:42 +0100 (BST)  
From: J.Bennett@lboro.ac.uk  
To: qrp-l@lehigh.edu  
Subject: [135048] Mag Loops  
Message-ID: <1032045522.3d83c3d28f716@staff-webmail.lboro.ac.uk>  
MIME-Version: 1.0  
Content-Type: text/plain  
Content-Transfer-Encoding: 8bit

I am about to construct a mag loop on the roof space (loft) of my home with the approx dimension of a rectangle 16 ft x 7 ft with 30mm diam copper tube and tuned by a 7 - 1000 pf vacuum variable. Does anyone on the reflector have any experience of such an installation, and if so what were the results?

Your comments would be very much appreciated.

Many thanks,

Jack,  
G3PVG  
GQRP 4725

-----  
Date: Sat, 14 Sep 2002 20:07:38 -0400  
From: Dan Halbert <halbert@bbn.com>  
To: qrp-l@lehigh.edu  
Subject: [135049] Re: Who does have the most stable vfo design?  
Message-ID: <200209150007.g8F07cF12080@localhost.localdomain>

I built several quite stable VFO's about 15 years ago, though I don't remember anything quantitative about their drift. At that time W7ZOI and W7EL recommended a Hartley JFET design with NP0 caps, and, if you could afford the space, an air-core inductor. W7EL's "Optimized QRP Transceiver" used a toroid, and he boiled it after winding.

Some good references are the "Ugly Weekender" transmitter article,

August, QST, August 1981, by father and son W7ZOI and KA7EXM (reprinted in 1992 ARRL Handbook (at least)), and the "Optimized" article, August 1980 QST, also in the '92 Handbook, in second edition of QRP Classics, and also at <http://www.arrl.org/tis/info/pdf/93hb3037.pdf>.

I built several rigs based on the building blocks in these radios and on other W7ZOI designs. They were great. For VFO's I used Miniductor stock soldered to a groundplane, and the rest was ugly construction.

Regards,  
Dan, KB1RT

-----  
Date: Sat, 14 Sep 2002 20:10:38 -0400  
From: Michael Babineau <michael.babineau@sympatico.ca>  
To: qrp-l@lehigh.edu  
Subject: [135050] Re: Software Upgrades for Radios  
Message-ID: <903F91C2-C83F-11D6-9D8E-00039309268A@sympatico.ca>  
Mime-Version: 1.0 (Apple Message framework v482)  
Content-Type: text/plain; charset=US-ASCII; format=flowed  
Content-Transfer-Encoding: 7bit

Yup .. when I first bought my Pegasus there was no AM mode and no Speech Processor.

A simple, free downloadable firmware update and vola!

You gotta love these guys at Ten-Tec.

Michael VE3WMB

Doug wrote :

>Did you guys know that TenTec offers FREE software upgrades for its radios?

>You DON'T have to pay for the upgrade in firmware. I find that very  
> refreshing. Kudo's to the guys at TenTec. 72, Doug

-----  
Date: Sat, 14 Sep 2002 17:12:59 -0700  
From: "Doug Hendricks" <ki6ds@dospalos.org>  
To: "qrp-l" <qrp-l@lehigh.edu>  
Subject: [135051] Stabel VFO's  
Message-ID: <012c01c25c4c\$a7f7cce0\$1fa3ad40@DOUG>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"

Content-Transfer-Encoding: 7bit

Well, I built a vfo a couple of weeks ago that is from Dave Benson's SW+40. I did it Manhattan Style, and it is very, very stable. When you listen to it on a receiver, i.e. put it on a frequency and listen, it just doesn't move. I had it over at Dave Fifields' and he tested it using an 817 as the receiver. He was amazed at the stability. Even more so, when he tested a second one, and found it just as stable.

Guys I realize that component selection, who is building it, cabinet protection etc all enters into it. But I still say that there is some valuable learning to take place if you build all of the designer's circuits the same way, i.e. Manhattan, and compare them for stability. For one thing, we could build several, and then compare the drift with ours to the drift on a rig in a case? I would be interested in such a study, for no other reason than the information that it would give us as to the transfer of a design from a printed circuit board to Manhattan style construction (moot of course in the case of Jim Kortge.) 72, Doug

-----  
Date: Sat, 14 Sep 2002 18:38:15 -0600  
From: "Steve/n0tu" <n0tu@codenet.net>  
To: "Elecraft List" <elecraft@qth.net>, "QRP-L" <QRP-L@lehigh.edu>  
Subject: [135052] Re: K2 sn313  
Message-ID: <019901c25c50\$2eb61860\$d851f8d1@agilent.com>  
MIME-Version: 1.0  
Content-Type: text/plain;  
          charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

SOLD or should I traded! ...anyway it's gone! Thanks guys. Steve.

----- Original Message -----

From: "Steve/n0tu" <n0tu@codenet.net>  
To: "QRP-L" <QRP-L@lehigh.edu>  
Sent: Friday, September 13, 2002 5:11 PM  
Subject: FS: K2 sn313

> For Sale: K2 SN313 - w/NB & 160m options, and  
> KAF2 audio filter and RT clock It's built but not installed yet.  
> Works FB! May consider trade for K1 (prefer 4-band)+ diff.  
>  
> email n0tu@codenet or 719 481-6561 Steve  
>  
>  
>

-----  
Date: Sat, 14 Sep 2002 20:57:00 -0400  
From: "W3CDE Jerry L." <w3cde@bellsouth.net>  
To: unlisted-recipients;; (no To-header on input)  
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [135053] Re: Galena doesn't work!  
Message-ID: <3D83DADC.EB12B499@bellsouth.net>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Now thinking back when I had a Philmore mount with a cats  
whisker...( circa 1949-50 ). The cats whisker was made of  
about 24 or 24 AWG steel wire. And it was blunt on the end...

Jerry  
W3CDE

Mike Yetsko wrote:

>  
> When I played with galena as a Cub Scout, I put the piece in a small ring  
> of copper pipe. There was a bolt through the pipe and that made one  
> contact and held it tight. (I saw this in a picture somewhere, it wasn't  
> my  
> idea)  
>  
> If I remember it right, the safety pin I found had to be set up to just  
> barely  
> touch the galena. Too much pressure and it died. And I had to move it a  
> lot. I'd get it to work, and it'd only work for a while, like that day,  
> and the  
> next day I'd have to position it again.  
>  
> Someone once told me the problem is you need the pin to make contact  
> but NOT break through some surface layer. If you just barely make the  
> contact, you get a non-linear junction, but if you break through, then it  
> just conducts.  
>  
> Mike

Date: Sat, 14 Sep 2002 20:07:50 -0500  
From: John Seboldt <k0jd-l@seboldt.net>  
To: qrp-l@lehigh.edu  
Subject: [135054] RE: Who does have the most stable vfo design?  
Message-ID: <5.1.0.14.0.20020914200229.00a1fec0@seboldt.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 07:16 AM 9/14/02 -0400, you wrote:  
>How to build a stable VFOs consistently is a mystery to me.

Well, takes some work.

I worked hard on temperature compensating a 7 MHz VFO for my portable 40/20 meter rig. Even with a nice shielded box (PC material), firm mounting inside a die-cast aluminum box, etc., temperature compensation was my final approach, and it took several tries. Details at <http://www.seboldt.net/k0jd/vfostab.txt> and <http://www.seboldt.net/k0jd/minivfo.html>

John K0JD

-----  
Date: Sat, 14 Sep 2002 20:05:11 -0500  
From: "Rob Matherly" <w0jrm@arrl.net>  
To: <qrp-l@lehigh.edu>, <fpqrp-l@fpqrp.com>, <soc@mailman.qth.net>  
Subject: [135055] WTB: 4-6 Gig IDE HD  
Message-ID: <004c01c25c54\$43afd400\$1c11a541@jimrob>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Like it says, looking for a 4-6 Gig IDE HD. Please reply to w0jrm@arrl.net

72/73/oo  
Rob, w0jrm

=====  
Visit my website! <http://www.qsl.net/w0jrm>  
=====

---  
Outgoing mail is certified Virus Free.  
Checked by AVG anti-virus system (<http://www.grisoft.com>).

Version: 6.0.386 / Virus Database: 218 - Release Date: 9/9/02

-----  
Date: Sat, 14 Sep 2002 20:23:11 -0600  
From: "Dave Ek" <ekdave@earthlink.net>  
To: "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Subject: [135056] QRP to the woods... (kinda long and probably pointless)  
Message-ID: <002601c25c5e\$d6d9e2c0\$8989fea9@oldman>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="Windows-1252"  
Content-Transfer-Encoding: 7bit

Hey Gang -

Thought I'd share my day with you. I ventured into Lost Creek Wilderness here in central Colorado this morning with a mission of doing some hiking, camping, exploring, and field-testing my setup in anticipation of QRP Afield next weekend. I hit the Ute Creek trailhead (on the southwest side, just east of Tarryall reservoir) about 10 AM with a fully-loaded (i.e. too-heavy) pack and started up the trail. I'd never been on this trail before and ended up spending a couple hours hiking and generally exploring while looking for a decent place to set up. At one point I climbed to the top of a hill to check out the view, and spotted a hidden meadow on the other side of the trail.

What a great find! It really is hidden pretty well from the trail, but not hard to reach if you know where you're going. I found a nice spot at the edge of the meadow and set up my antenna. I've been using a half-size G5RV, made from a suitable length of 300-ohm twinlead and enough RG58 to allow me to put it up about 25 feet or so, and insulated teflon wire for the radiators. I can put it up as an inverted vee without too much effort, and I can connect it directly to my K1 (with ATU) without need for a balun and tune it up well enough on all four of its bands.

My field contesting setup consists of my K1/4/ATU, my Serial CW Sender (see the latest QRP Homebrewer), and my Palm m100 running my Golog logging program. The last couple times I'd used this setup in the field I had problems with digital hash in the K1 receiver from the Palm. This time I brought along a couple of snap-on chokes from Radio Shack to see if it would take care of the problem, so I tested the setup on all bands with and without the chokes on the cables going from the Palm to the CW Sender to the K1. It was apparent that the chokes made a big difference in noise levels. Cool.

So here I am, sitting in a secluded meadow in the wilderness on a pleasant



sunny day, playing ham radio, thinking what a great day it was! And then a four-ship flight of F-16s roared past directly above me. How cool! And the last thing I would have expected.

Anyway, I tuned around on 20m a bit (seemed like the bands were good today) and found N5XM calling CQ, so I answered him. He was running 80 watts from Ft. Smith, Arkansas and was pretty strong. He gave me a 559. We had a nice chat, and then I packed up and headed back down the trail to the car.

It was a great day! My account here doesn't do it justice. But I felt like sharing it with someone.

73 de Dave NK0E

-----  
Date: Sat, 14 Sep 2002 20:34:45 -0600  
From: "Dave Ek" <ekdave@earthlink.net>  
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Cc: <n2apb@amsat.org>  
Subject: [135057] Serial CW Sender noise issues  
Message-ID: <003101c25c60\$74800d00\$8989fea9@oldman>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Gang,

If you've built my Serial CW Sender circuit (see the latest QRP Homebrewer for a project description--NJQRP is selling it in kit form), you may or may not have noticed that the combination of the CW Sender and the Palm PDA can cause some digital hash noise problems in your receiver. It's been a real head-scratcher for me, because I've had the problem in the field but can't reproduce it in the shack. At any rate, today I took my stuff back out into the field and did some testing. I determined that if I put a Radio Shack snap-on core (the rectangular one) on the serial line from the Palm to the CW Sender, and another one from the CW Sender to the rig on the keyline, it pretty-much took care of the noise problem. I wound seven or eight turns on each of the cores (that's all there was room for).

The actual way that the noise gets into the rig is a bit puzzling. At first I thought maybe it was just coming in through the keyline, but I can't explain why I get the problem in the field but not in the shack. The only other thing I can think of is that the Palm and keyline cables were radiating and being picked up by the antenna. In the field I'm usually

underneath the antenna, while in the shack I'm farther away and inside the house in the basement. If anyone has some other ideas on why this happens, I'd love to hear them.

73 de Dave NK0E

-----  
Date: Sat, 14 Sep 2002 21:43:04 -0500  
From: "J. W. (Dub) Thornton" <dub@oklahoma.net>  
To: qrp-l@lehigh.edu  
Subject: [135058] Needed: Norcal 40 schematic  
Message-ID: <5.1.0.14.2.20020914213910.02670790@mail.oklahoma.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"; format=flowed

I seem to have misplaced/lost the manual to my Norcal 40, the original club kit. Anyone have the ability to copy the schematic and email, or snail mail it. I will be more'n happy to reimburse costs. Thanks

"72" Dub

-

J. W. (Dub) Thornton WA5YFY  
Minco, OK.

-----  
Date: Sat, 14 Sep 2002 21:03:53 -0700  
From: "Trevor Jacobs" <kg6cyn@earthlink.net>  
To: <ekdave@earthlink.net>, "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Subject: [135059] Re: QRP to the woods... (kinda long and probably pointless)  
Message-ID: <001401c25c6c\$e83f96a0\$2fe3b3d1@tjacobs>  
MIME-Version: 1.0  
Content-Type: text/plain; charset="Windows-1252"  
Content-Transfer-Encoding: 7bit

Dave,

Sounds like you not only had a great time, but also found a great field site! I love these kind of stories, and it's definetly not pointless! This to me, is what QRP operating is all about. Good luck in the up

coming to the field event! BTW haven't seen an F-16 in that air for quite a while...bet it was cool! Take care!

73's Trev KG6CYN

<http://home.earthlink.net/~kg6cyn>

<http://www.qsl.net/kg6cyn>

-----  
Date: Sun, 15 Sep 2002 04:53:11 +0000  
From: "Brad Hernlem" <alihernlem@hotmail.com>  
To: glowbugs@piobaire.mines.uidaho.edu  
Cc: qrp-1@lehigh.edu  
Subject: [135060] Crystals, Q, R and Greek Orthodoxy  
Message-ID: <F144IkQsB4i0ccX0ygY00003ac2@hotmail.com>  
Mime-Version: 1.0  
Content-Type: text/plain; format=flowed

Hmmmm, I was reading Heising's book, "Quartz Crystals for Electrical Circuits", the other day. This was one of my recent swapmeet finds. According to this book, the resistive component of the circuit model is due mainly to losses generated in setting up motion in the air about the vibrating crystal. It is claimed that this can be demonstrated by noting the time needed for a circuit to die down (ring down) when circuit voltage is withdrawn. A setup is described where a 100 kc crystal controlled oscillator is beat against a 99 kc signal and the duration of ringdown is noted until the beat note is no longer audible. When the crystal is placed in vacuum, the ringdown is prolonged indicating much higher "Q". The text does not elaborate on how to determine "Q" from this method but if one knows the initial amplitude and the relation of this to the amplitude at "no longer audible" it should be straight forward. For a 100 kc crystal this duration in vacuo was said to be about 8 seconds for the example. I would suppose that the duration would fall inversely with frequency so that it would be virtually impossible to use this technique for HF crystals without a scope. My reasoning being that Q is related to the amount of energy, and therefore amplitude, lost during each cycle. Higher frequency crystals having shorter cycles, their ringdown would be faster for the same Q.

I had thought that the "R" of a crystal was an intrinsic property of the crystal and not determined by its environment. Well, the text DOES state that "R" is also determined by losses in the crystal mounting but this is supposedly less important. Now I am wondering whether elevation, atmospheric pressure and temperature all play a role in crystal "R" and whether these factors could influence a filter

derived from crystals. Would it be significant enough to notice changes in the bandwidth or flatness of a ladder filter, say between sea level and up 10 or 15 thousand feet or between summer and winter in Minnesota (i.e. from >90F to <-35F)?

Now I suppose you are all wondering what this have to do with Greek Orthodox churches. Well, not much, but I was at a local Greek festival this afternoon located on the grounds of a Greek Orthodox church. There was a tour of the church so I went inside. The design and structure of the building was such that it had extraordinary acoustics. The priest's voice seemed to resonate and die down over a noticeably long period. Furthermore, the tone of the resonant note seemed to be relatively constant. Not being a scholar of acoustics I wonder whether the same concepts of "Q" are employed in that area of study.

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Send and receive Hotmail on your mobile device: <http://mobile.msn.com>

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Date: Sun, 15 Sep 2002 09:05:20 +0000  
From: "Leon Heller" <leon\_heller@hotmail.com>  
To: myetsko@insydesw.com, qrp-1@lehigh.edu  
Subject: [135061] Re: Galena doesn't work!  
Message-ID: <F564ti3yp6ioFCrhUH40001223c@hotmail.com>  
Mime-Version: 1.0  
Content-Type: text/plain; format=flowed

>From: "Mike Yetsko" <myetsko@insydesw.com>  
>To: <leon\_heller@hotmail.com>,"Low Power Amateur Radio Discussion"  
><qrp-1@Lehigh.EDU>  
>Subject: Re: Galena doesn't work!  
>Date: Sat, 14 Sep 2002 13:49:43 -0400  
>  
> > I just can't get that piece of galena to work as a detector. I first got  
>the  
> > circuit working with a Ge diode, and then substituted the galena for the  
> > diode. The galena has a thick piece of silver-coated copper wire wrapped  
> > round it and tightened with a pair of pliers, easier than messing about  
>with  
> > Woods metal.  
> >

> > 73, Leon

>

>When I played with galena as a Cub Scout, I put the piece in a small ring  
>of copper pipe. There was a bolt through the pipe and that made one  
>contact and held it tight. (I saw this in a picture somewhere, it wasn't  
>my  
>idea)

>

>If I remember it right, the safety pin I found had to be set up to just  
>barely  
>touch the galena. Too much pressure and it died. And I had to move it a  
>lot. I'd get it to work, and it'd only work for a while, like that day,  
>and the  
>next day I'd have to position it again.

>

>Someone once told me the problem is you need the pin to make contact  
>but NOT break through some surface layer. If you just barely make the  
>contact, you get a non-linear junction, but if you break through, then it  
>just conducts.

>

>Mike

Thanks. That seems to be what is going wrong. Just touching the surface very gently with the tip of a copper wire works, very occasionally. I need a stable mechanical arrangement. It seems a lot less efficient than the germanium diode, the output is about a third of the latter.

73, Leon

--

Leon Heller, G1HSM Tel: +44 1424 14790

Email:leon\_heller@hotmail.com

My web page: [http://www.geocities.com/leon\\_heller](http://www.geocities.com/leon_heller)

My low-cost Altera Flex design kit: <http://www.leonheller.com>

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<http://photos.msn.com/support/worldwide.aspx>

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Date: Sun, 15 Sep 2002 10:50:34 +0200

From: "Per-Arne Asp" <per-arne.asp@tordata.se>

To: <qrp-1@lehigh.edu>

Subject: [135062] Re: QRP to the woods... (kinda long and probably pointless)

Message-ID: <000501c25c94\$f4ebbb40\$6a00a8c0@pa>

MIME-Version: 1.0

Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: quoted-printable

Your post was not at all pointless. It was a wonderful description of =  
the union between two great hobbies: ham radio and hiking/trekking. I =  
would love to see more of this on qrp-l!

72/73 de p-a, sm4inv

<http://www.asp.st>

-----  
"Take nothing but memories=20  
Leave nothing but footprints=20  
Kill nothing but time=20  
Above all, have fun "=20

-----  
Date: Sun, 15 Sep 2002 09:18:56 +0000  
From: "Leon Heller" <leon\_heller@hotmail.com>  
To: halbert@bbn.com, qrp-l@lehigh.edu  
Subject: [135063] Re: Who does have the most stable vfo design?  
Message-ID: <F98FD705CkJNQNXSqVd000002280@hotmail.com>  
Mime-Version: 1.0  
Content-Type: text/plain; format=flowed

>From: Dan Halbert <halbert@bbn.com>  
>Reply-To: halbert@bbn.com  
>To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>  
>Subject: Re: Who does have the most stable vfo design?  
>Date: Sat, 14 Sep 2002 20:07:38 -0400  
>  
>I built several quite stable VFO's about 15 years ago, though I don't  
>remember anything quantitative about their drift. At that time  
>W7ZOI and W7EL recommended a Hartley JFET design with NP0 caps, and, if you  
>could afford the space, an air-core inductor. W7EL's "Optimized QRP  
>Transceiver" used a toroid, and he boiled it after winding.  
>

What is the rationale for cooking the inductor? I've always wondered.

With the valve (tube) oscillators used many years ago, they often used Pyrex  
or ceramic coil forms, without cores, for temperature stability. Oxley

Tempatrimmers (very expensive temperature compensation capacitors) were used, as well. The tuned circuit was sometimes in a separate compartment from the valve circuitry, to keep it away from the heat generated by the latter.

73, Leon

--

Leon Heller, G1HSM Tel: +44 1424 14790

Email:leon\_heller@hotmail.com

My web page: [http://www.geocities.com/leon\\_heller](http://www.geocities.com/leon_heller)

My low-cost Altera Flex design kit: <http://www.leonheller.com>

---

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---

Date: Sun, 15 Sep 2002 09:37:34 +0000  
From: "Leon Heller" <leon\_heller@hotmail.com>  
To: alihernlem@hotmail.com, qrp-1@lehigh.edu  
Subject: [135064] Re: Crystals, Q, R and Greek Orthodoxy  
Message-ID: <F208QB2qIuSRhAssGze0002668a@hotmail.com>  
Mime-Version: 1.0  
Content-Type: text/plain; format=flowed

>From: "Brad Hernlem" <alihernlem@hotmail.com>  
>Reply-To: alihernlem@hotmail.com  
>To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>  
>Subject: Crystals, Q, R and Greek Orthodoxy Date: Sun, 15 Sep 2002 04:53:11  
>+0000

[deleted]

>

>I had thought that the "R" of a crystal was an intrinsic property of  
>the crystal and not determined by its environment. Well, the text  
>DOES state that "R" is also determined by losses in the crystal  
>mounting but this is supposedly less important. Now I am wondering  
>whether elevation, atmospheric pressure and temperature all play a  
>role in crystal "R" and whether these factors could influence a filter  
>derived from crystals. Would it be significant enough to notice changes

>in the bandwidth or flatness of a ladder filter, say between sea level  
>and up 10 or 15 thousand feet or between summer and winter in Minnesota  
>(i.e. from >90F to <-35F)?

I think it would be minimal. I recently did a Monte Carlo SPICE analysis of a filter to see the effect of capacitor tolerance (5%) and concluded that it wouldn't be noticeable, so I think the same would apply to R.

Lots of mechanical phenomena have electronic analogues, and the same would apply to acoustics. The Royal Festival Hall in London had a problem with the acoustics when it was built in the early 50s which they solved by inserting \*lots\* of milk bottles in the ceiling (open end down, of course); they acted as resonators and solved the problem. The Albert Hall apparently sounded better when it was first built than today, because the ladies' crinolines had a damping effect. Perhaps someone should test this theory by filling the place with simulated Victorian ladies and gentlemen. 8-)

73, Leon

--

Leon Heller, G1HSM Tel: +44 1424 14790

Email:leon\_heller@hotmail.com

My web page: [http://www.geocities.com/leon\\_heller](http://www.geocities.com/leon_heller)

My low-cost Altera Flex design kit: <http://www.leonheller.com>

---

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-----  
Date: Sun, 15 Sep 2002 06:40:55 -0400

From: "Bill, N4QA" <n4qa@hotmail.com>

To: qrp-l@lehigh.edu

Subject: [135065] THREE pair(s) of reading glasses and a tiny strip of electrical tape...

Message-ID: <F33arcR4ZDgC81TbdkS0001ce30@hotmail.com>

Mime-Version: 1.0

Content-Type: text/plain; format=flowed

Whew!

That's what it took for me to get the SA612A SMD soldered down at U1 on my new Rock-Mite-20...

Now I can relax...remove a couple pair(s) of glasses and ENJOY the remaining segments of the assembly process :)

Yes, the tape was for holding the little bugger in place while I made the first joint...oh, and the board nearly gets lost in my bench vise...

I oughta get smaller tools for jobs like this.



The eighth-inch chisel tip ain't as steady as she once was...  
Now, where will I mount this li'l jewel when I'm done afterwhile...  
'neath the paddles, maybe...

73.

Bill, N4QA

<http://www.qsl.net/n4qa/>

ps

Due to spam countermeasures, I see responses via this list's archives and  
via personal contacts list only.

---

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---

Date: Sun, 15 Sep 2002 07:30:51 -0400  
From: John R Kirby <n3aaz-qrp@juno.com>  
To: qrp-1@lehigh.edu  
Subject: [135066] Single letter beacons  
Message-ID: <20020915.073059.-316177.1.n3aaz-qrp@juno.com>  
MIME-Version: 1.0  
Content-Type: text/plain  
Content-Transfer-Encoding: 7bit

Anybody know of HF single letter beacons still transmitting?

John  
N3AAZ  
FM 19 xa

---

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---

Date: Sun, 15 Sep 2002 07:56:25 -0400  
From: John R Kirby <n3aaz-qrp@juno.com>  
To: qrp-1@lehigh.edu

Subject: [135067] Re: QRP to the woods...  
Message-ID: <20020915.075741.-316177.2.n3aaz-qrp@juno.com>  
MIME-Version: 1.0  
Content-Type: text/plain  
Content-Transfer-Encoding: 7bit

>From: "Dave Ek" <ekdave@earthlink.net>  
>To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>  
>Date: Sat, 14 Sep 2002 20:23:11 -0600  
>Subject: QRP to the woods... (kinda long and probably pointless)

Dave, TNX for sharing ! ! !

>"and probably pointless"  
NOT AT ALL . . .

. . . gleened from Dave's post . . .

A gratifying personal experience and  
several problems solved, therefore,  
our next 'trip will be more successful.

>"It was a great day! "  
I am sure it was.

Tnx again Dave.

John  
N3AAZ  
FM 19 xa

---

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---

Date: Sun, 15 Sep 2002 08:23:36 -0400  
From: "Bill, N4QA" <n4qa@hotmail.com>  
To: qrp-1@lehigh.edu  
Subject: [135068] 'Undocumented' Rock-Mite ass'y steps which should be avoided!  
Message-ID: <F73Jgk19YDBKL5Nrgu0000352f@hotmail.com>

Mime-Version: 1.0

Content-Type: text/plain; format=flowed

Do not...I repeat, DO NOT perform the following 'undocumented' Rock-Mite assembly steps:

- 1) Mount (and solder) Y1 in holes intended for C101.
- 2) Instantly turn red-faced, say a few choice words (especially on Sunday), then carefully de-solder and extract Y1 from holes intended for C101.

The above steps are ENTIRELY unnecessary and will only serve to impede your progress...(sheepish <G>)

73.

Bill, N4QA

<http://www.qsl.net/n4qa/>

ps

Due to spam countermeasures, I see responses via this list's archives and via personal contacts list only.

---

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Date: Sun, 15 Sep 2002 13:24:23 +0100

From: "Leon Heller" <leon\_heller@hotmail.com>

To: "Low Power" <qrp-l@lehigh.edu>

Subject: [135069] AD8302 (network analyser on a chip)

Message-ID: <DAV45QG101s7hpJm80t0000155d@hotmail.com>

MIME-Version: 1.0

Content-Type: text/plain;  
charset="iso-8859-1"

Content-Transfer-Encoding: 7bit

I got a couple of sample AD8302 chips (RF/IF gain and phase detector) from ADI the other day. It's got most of the RF stuff needed for a vector network analyser on it, and is good for up to 2.7 GHz! It's also useful for other applications like RF power control and linearisation in PAs. They will work at HF and VHF, of course. The data sheet has the circuit for the guts of a VNA, including the PCB layout.

Being in a 14-lead TSSOP package (0.65 mm spacing) it isn't too difficult to work with using home-made PCBs. I intend to experiment with one within the

next few days. Is anybody else interested?

VNAs are ideal for testing crystals, filters etc.

73, Leon

--

Leon Heller, G1HSM

leon\_heller@hotmail.com

[http://www.geocities.com/leon\\_heller](http://www.geocities.com/leon_heller)

-----  
Date: Sun, 15 Sep 2002 08:45:27 -0400 (EDT)  
From: wb0wao@hotmail.com (Dennis Ponsness)  
To: leon\_heller@hotmail.com  
Cc: qrp-l@lehigh.edu (Low Power Amateur Radio Discussion)  
Subject: [135070] Re: Who does have the most stable vfo design?  
Message-ID: <14549-3D8480E7-7977@storefull-2158.public.lawson.webtv.net>  
Content-Disposition: Inline  
Content-Type: Text/Plain; Charset=US-ASCII  
Content-Transfer-Encoding: 7Bit  
MIME-Version: 1.0 (WebTV)

In reference to "boiling" the toroid - I THINK it is done to "set" the winding by relieving the stresses in the wire by annealing. At least that is what someone told me at one time, but I have never done it myself.

72 es oo

Dennis - WB0WAO

NJQRP #329  
FPQRP #-347  
SOC #499  
FISTS # 9299  
GACW #622  
ARS #1363

-----  
Date: Sun, 15 Sep 2002 08:56:50 -0400  
From: David Hinerman <WD8CIV@worldnet.att.net>  
To: qrp-l@lehigh.edu  
Subject: [135071] Re: Serial CW Sender noise issues  
Message-ID: <5.1.0.14.1.20020915085415.00b27af8@postoffice.worldnet.att.net>

Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"; format=flowed

>The actual way that the noise gets into the rig is a bit puzzling. At first  
>I thought maybe it was just coming in through the keyline, but I can't  
>explain why I get the problem in the field but not in the shack. The only  
>other thing I can think of is that the Palm and keyline cables were  
>radiating and being picked up by the antenna. In the field I'm usually  
>underneath the antenna, while in the shack I'm farther away and inside the  
>house in the basement. If anyone has some other ideas on why this happens,  
>I'd love to hear them.

Dave,

Perhaps through the power leads? I'd say your antenna theory is the most  
likely, though.

Dave

-----  
"You can fool some of the people all of the time. That's enough to make a  
living." - Lance Burton  
-----

Dave Hinerman  
WD8CIV@att.net

-----  
Date: Sun, 15 Sep 2002 09:14:34 -0400  
From: "Lee Mairs" <lmairs@cox.net>  
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Subject: [135072] Re: Crystals, Q, R and Greek Orthodoxy  
Message-ID: <001301c25cb9\$d632e500\$6901a8c0@boomer>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

An organist friend of mine says that new churches have the absolute best  
acoustics. Over time, donations for carpet, pew cushions, drapes, etc.  
worked to "deaden" the sound. Sounds like "R" to me!  
73 de Lee  
KM4YY

> Lots of mechanical phenomena have electronic analogues, and the same would

> apply to acoustics. The Royal Festival Hall in London had a problem with the  
> acoustics when it was built in the early 50s which they solved by inserting  
> \*lots\* of milk bottles in the ceiling (open end down, of course); they acted  
> as resonators and solved the problem. The Albert Hall apparently sounded  
> better when it was first built than today, because the ladies' crinolines  
> had a damping effect. Perhaps someone should test this theory by filling the  
> place with simulated Victorian ladies and gentlemen. 8-)

-----  
Date: Sun, 15 Sep 2002 08:15:17 -0500  
From: Nick Kennedy <nkennedy@tcainternet.com>  
To: "'ekdave@earthlink.net'" <ekdave@earthlink.net>,  
Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [135073] RE: QRP to the woods... (kinda long and probably pointless)  
Message-ID: <01C25C90.071D4540.nkennedy@tcainternet.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"  
Content-Transfer-Encoding: 7bit

Great story. I gotta get off my [chair] and try that radio backpacking stuff sometime.

72--Nick, WA5BDU

-----Original Message-----  
From: Dave Ek [SMTP:ekdave@earthlink.net]  
Sent: Saturday, September 14, 2002 9:23 PM  
To: Low Power Amateur Radio Discussion  
Subject: QRP to the woods... (kinda long and probably pointless)

<< File: ATT00012.txt; charset = Windows-1252 >>

-----  
Date: Sun, 15 Sep 2002 08:18:40 -0500  
From: "Brian" <brian@iquest.net>  
To: <n4qa@hotmail.com>,  
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Subject: [135074] Re: 'Undocumented' Rock-Mite ass'y steps which should be

avoided!

Message-ID: <005e01c25cba\$692e7540\$06622bd1@bmurrey2K>

MIME-Version: 1.0

Content-Type: text/plain;  
charset="Windows-1252"

Content-Transfer-Encoding: 7bit

If you do put Y1 in C101, make sure you do a great soldering job and then immediately nip off the leads so flush with the board, it'd be impossible to ever remove it cleanly. <grin>

BEEN THERE.

73

----- Original Message -----

From: "Bill, N4QA" <n4qa@hotmail.com>

To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>

Sent: Sunday, September 15, 2002 7:23 AM

Subject: 'Undocumented' Rock-Mite ass'y steps which should be avoided!

> Do not...I repeat, DO NOT perform the following 'undocumented'  
Rock-Mite

> assembly steps:

>

> 1) Mount (and solder) Y1 in holes intended for C101.

>

> 2) Instantly turn red-faced, say a few choice words (especially on  
Sunday),

> then carefully de-solder and extract Y1 from holes intended for  
C101.

>

> The above steps are ENTIRELY unnecessary and will only serve to  
impede your

> progress...(sheepish <G>)

>

> 73.

> Bill, N4QA

> <http://www.qsl.net/n4qa/>

> ps

> Due to spam countermeasures, I see responses via this list's  
archives and

> via personal contacts list only.

>

>

> -----

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> <http://photos.msn.com/support/worldwide.aspx>  
>  
>  
>

-----  
Date: Sun, 15 Sep 2002 08:19:17 -0500  
From: Nick Kennedy <nkennedy@tcainternet.com>  
To: "'alihernlem@hotmail.com'" <alihernlem@hotmail.com>,  
Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [135075] RE: Crystals, Q, R and Greek Orthodoxy  
Message-ID: <01C25C90.968A7EA0.nkennedy@tcainternet.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"  
Content-Transfer-Encoding: 7bit

Pretty interesting. But I need to spend my time in church praying for my ailing homebrew projects instead of contemplating the Q of the acoustic chamber.

When our backpacking QRP types finally venture into space, is the vacuum going to limit the pullability of their VX0s?

72--Nick, WA5BDU

-----Original Message-----

From: Brad Hernlem [SMTP:alihernlem@hotmail.com]  
Sent: Saturday, September 14, 2002 11:53 PM  
To: Low Power Amateur Radio Discussion  
Subject: Crystals, Q, R and Greek Orthodoxy

Hmmmm, I was reading Heising's book, "Quartz Crystals for Electrical Circuits", the other day. This was one of my recent swapmeet finds. According to this book, the resistive component of the circuit model is due mainly to losses generated in setting up motion in the air about the vibrating crystal.

-----  
Date: Sun, 15 Sep 2002 07:28:56 -0600  
From: "Dave Ek" <ekdave@earthlink.net>



To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Subject: [135076] Re: Serial CW Sender noise issues  
Message-ID: <00ef01c25cbb\$d7d8e1f0\$8989fea9@oldman>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="Windows-1252"  
Content-Transfer-Encoding: 7bit

Dave,

Thanks for the idea. Perhaps it's from the power leads, but I don't think it's likely. Everything's running off separate batteries.

73 de Dave NK0E

-----  
Dave wrote:

Perhaps through the power leads? I'd say your antenna theory is the most likely, though.

-----  
Date: Sun, 15 Sep 2002 11:32:02 -0500  
From: Nick Kennedy <nkennedy@tcainternet.com>  
To: "Low Power Amateur Radio Discussion (E-mail)" <qrp-l@lehigh.edu>  
Subject: [135077] Hooray! New rig comes to life; takes bite out of the ether ...  
Message-ID: <01C25CAB.83D17320.nkennedy@tcainternet.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"  
Content-Transfer-Encoding: 7bit

Those first bare board QSOs with a new rig are always big fun. Just made a couple on 10.15 or thereabouts with my new 40-40 or SW-30 or something in between. Not sure how many incarnations this rig has had. It was the 40-40 (30-30) in the November, 1994 QST and in the ARRL's "QRP Power" book. Upgraded to the SW-30 by designer Dave Benson and SWL. Probably every one else built theirs six or eight years ago, but I'm still playing catch up.

It's hard to choose between an etched board and going Manhattan or ugly, but the tiny size of a well done board was hard to resist. I say that even though I find troubleshooting and rework to be a nightmare with PCBs. So anyway, I got the board from FAR. A board layout with parts overlay provided by a QRP-L member proved to be indispensable.

I had to chart out all the various permutations and combinations to get straight in my head what I was building. Toroids, not IF cans; 7.68 MHz IFs, not 8 MHz; three pole filter, not two.

Actually, I was originally set to go with the two pole filter, because I'd already installed it that way and the board wasn't designed for three. But though I hate board modifications (lifted pads--ugh!), I couldn't abide hearing that 'opposite side of zero beat' signal. This board was to be the practical fulfillment of all the crystal filter study I was making so much noise about a month or so ago, so it needed a good filter. It's amazing how much better the three pole filter performs than the two. The filter design I did needed fewer end matching components, allowing me to jam the 3-pole filter into space allotted for a 2-pole. Sometimes things DO work out. And like Frank Sinatra and Sid Vicious I was able to say, "I did it my way." On the filter anyway. Fortunately the excellent overall design was there for me to use.

Beyond that, I tried to take my own advice and that of others from recent "how to homebrew" threads and do a stage at a time with testing at each stage. That was pretty effective but I still managed to have zero output from the TX on first trial. But I was able to fix that and as a bonus found out that solder wick really is wonderful stuff.

I still think that for techno-dabblers, one of the biggest transceiver bugger-boos is getting all the various oscillators and filters in synch. I speak from experience on that one. With the received (heterodyned) signal in middle of the filter passband, the BFO crystal needs to be set at that frequency plus the desired pitch (700 Hz or so). And the transmit mixer crystal needs to be set to the to the middle of the filter passband. I think. So when you tune in a guy for the right pitch and answer him, he hears you with the same pitch. Of course the procedure is a little different for rigs that shift the VFO instead of having a separate TX LO. With rigs that monitor the TX signal for a sidetone (like the SW-30), just hearing the right sidetone should tell you things are OK.

With a "kit-o-parts", the supplied crystals should have the proper frequencies and characteristics for pulling to allow reproduction of a design. But when the builder scrapes up his own parts, results can be all over the board. So a bit of knowledge of how crystals work (or model, anyway) can be really useful in tweaking these little buggers in line. I used to take blind stabs at pulling crystals, with frustrating results, but now I'm able to at least take an educated (calculated) shot at how much L or C I need to add or subtract.

Beyond that, a couple more comments on the SW-30. A transceiver needs to be more than the sum of its parts. Even if all the pieces are working on their own, what about sidetone level and ear-killing keying pops and the

aforementioned dreaded oscillator out-of-synch-ness? This little rig is as smooth as can be. Sidetone just right; no pops. Recommended.

72--Nick, WA5BDU

-----  
Date: Sun, 15 Sep 2002 14:21:44 -0400  
From: "Tom Curtola" <tcurtola@rogers.com>  
To: "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Subject: [135078] OT: Poem From QST 1917  
Message-ID: <000701c25ce4\$bf2a1420\$f44a9c18@bloor.phub.net.cable.rogers.com>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

A Radio Ravin'  
With apologies to Edgar Allen Poe

By 8WR  
QST September 1917 page 10

I

Once, upon a midnight dreary,  
while I listened, drowsy, weary;  
to the faint and fading signals,  
from a hundred miles and more.  
Suddenly, I heard a sputter,  
then a spark with hiss and flutter.  
Made me think of words to utter,  
that I'd never said before.  
And this spark with hiss and sputter,  
For some time the air did clutter;  
with its weird, unmeaning roar.  
'Twas a "ham," -- and nothing more.

II

Stopped the sounds, once more I listened,  
and my eyes with joy then glistened.  
As I heard the famous station,  
just installed in district four.  
As I listened, (all elation)  
to this great, far-distant station;  
whose faint signals seemed to thrill me,

chill me to the very core.  
Then again my phones resounded,  
by a wave with breadth unbounded.  
Made me wish my ground switch grounded;  
and my phones upon the floor.  
Who was this that jammed the ether,  
with his awe inspiring roar?  
Just a "ham," -- and nothing more.

### III

"QRM or QRT,"  
have your say, what e're it be,  
But anything you say to stop them,  
only serves to make them sore.  
Evening after evening spending  
Listening to these sounds heartrending  
Sends a man to stages pending  
Entrance to the asylum door.  
Makes him--once thought hardy, tireless,  
Feel like chucking up the wireless,  
Throwing 'phones, condensers, tuners,  
In the ash-heap, out the door;  
Give up all his old relations  
with his friends in other stations  
With a growl of "Nevermore!"

-----  
Date: Sun, 15 Sep 2002 14:42:58 -0400  
From: "David B. Sarraf" <david.sarraf@paonline.com>  
To: Leon Heller <leon\_heller@hotmail.com>  
Cc: Low Power <qrp-l@lehigh.edu>  
Subject: [135079] Galena doesn't work!  
Message-ID: <3D84D4B2.D6F64352@paonline.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Leon:

Just a guess, but it may make a difference if you break the lump open  
and expose the interior, or acid-etch the outside it like a steel  
samples are prepared for micrographic grain analysis.

I had a piece of 3mm dia. nichrome wire which I saved because it looked

like it would make a good crystal radio detector. It had been removed from service as a heating element because it had broken. The outside was dull, but the broken surface literally glittered with grain boundaries. The heating had caused grain growth and embrittlement which eventually led to the wire's demise. In contrast with the relatively amorphous exterior of the wire, the grains and boundaries would provide an abundance of high surface energy locations that would work well as a point contact diode. I never did test the wire and I don't know if the barrier voltage would have been too high (as it was with some older crystal diode materials such as silicon carbide).

I can't back this up with experiment but do know that theory says it should help.

Dave Sarraf

-----  
Date: Sun, 15 Sep 2002 15:48:30 -0400  
From: Harry Hurst <wa3ptg@comcast.net>  
To: wb0wao@hotmail.com,  
    "'Low Power Amateur Radio Discussion'" <qrp-l@lehigh.edu>  
Subject: [135080] RE: Who does have the most stable vfo design?  
Message-ID: <000001c25cf0\$de696230\$0500a8c0@matthew>  
MIME-version: 1.0  
Content-type: text/plain; charset=US-ASCII  
Content-transfer-encoding: 7BIT

I have to confess to boiling a toroid. It seemed kind of silly, standing there in the kitchen boiling a radio part. The manhattan VFO had an area slightly larger then the toroid ground out on both sides. I glued the coil to the bare area of the board. It was a standard hartly design with 2 buffer stages and a low-pass filter on the output. It's the most stable VFO I've ever built or seen (heard). Maybe it does help.

Hap, WA3PTG  
Wilmington DE

"Boiling coils, Batman", "we're drifting!"

-----Original Message-----

From: owner-qrp-l@Lehigh.EDU [mailto:owner-qrp-l@Lehigh.EDU] On Behalf Of  
Dennis Ponsness  
Sent: Sunday, September 15, 2002 8:45 AM

To: Low Power Amateur Radio Discussion  
Subject: Re: Who does have the most stable vfo design?

In reference to "boiling" the toroid - I THINK it is done to "set" the winding by relieving the stresses in the wire by annealing. At least that is what someone told me at one time, but I have never done it myself.

72 es oo

Dennis - WB0WAO

NJQRP #329  
FPQRP #-347  
SOC #499  
FISTS # 9299  
GACW #622  
ARS #1363

-----  
Date: Sun, 15 Sep 2002 13:11:10 -0700  
From: "Trevor Jacobs" <kg6cyn@earthlink.net>  
To: "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Subject: [135081] OT:IRLP  
Message-ID: <004901c25cf4\$08e9a260\$7ce3b3d1@tjacobs>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Hi Gang,

One thing that I'd been meaning to play around with a bit since I bought the FT-817 is VHF/UHF stuff. It's the first multi mode rig with VHF/UHF capabilities that I've owned. Anyway, I'd been reading a bit about IRLP on the web and it seemed like a real neat way of connecting. Turns out that my good friend Gerd W2ISB has a node in NY, so have been trying to get in touch with him over his repeater. Also, Glenn WA7SPY has node number 386 in Sacramento, and I was able to find Glenn on his repeater last night. Was real neat to chat with Glenn, and we had a good time. The thought arose, that this might be a neat way for QRPers to gather and swap info during events or maybe even have a club meeting over the link. Wonder if anyone else would be interested in this? Thanks for the OT bandwidth...I'm monitoring node 383...

73's Trev KG6CYN  
<http://home.earthlink.net/~kg6cyn>  
<http://www.qsl.net/kg6cyn>

-----  
Date: Sun, 15 Sep 2002 15:47:24 -0500  
From: Nick Kennedy <nkennedy@tcainternet.com>  
To: "'ki6ds@dph.dpol.net'" <ki6ds@dph.dpol.net>,  
Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [135082] RE: Who does have the most stable vfo design?  
Message-ID: <01C25CCF.30742960.nkennedy@tcainternet.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"  
Content-Transfer-Encoding: 7bit

Raised on the Heath VF-1 and Knight VF0, I'm not a big stability freak.  
(Or should I say FREQ?) I figure if I'm not noticeably moving and the  
other guy doesn't have to retune, I'm probably OK. Still it's a worthy  
goal and a fun thing.

Since I just finished the 30 meter 40-40, and just got a cool counter off  
of eBay, I'd measure the new rig's drift. The rig is not in a box yet and  
I didn't take special pains with stability. I used NPOs where I could and  
some big blue, probably poly-somethings in the oscillator's voltage  
divider/feedback network. The envelope please:

First I gave it one minute to warm up. In the modern age, who's got ten  
minutes to spare any more?

Logged the initial reading and then after 1 minute more:

+23 Hz drift

Then 7 more minutes gave

+106 Hz more (15.1 Hz per minute) (1.5 ppm / minute)

Then after the Cowboys cinched the "W" (17 more minutes)

+43 Hz more (2.5 Hz / minute) (0.3 ppm / minute)

And another 1 minute reading:

+2 Hz more (2 Hz / Minute) (0.2 ppm / minute)

The total 25 minute drift after 1 minute warmup was 174 Hz. The 18 minute drift after 8 minute warmup was 45 Hz.

For you musicians, a semi-tone at 700 Hz would be 41.6 Hz. For the rest of us, 45 Hz (or 174 Hz) is not going to move you out of a 500 Hz CW filter's bandpass.

How's that sound? Pretty good? I think it's OK.

72--Nick, WA5BDU

In order to keep from affecting the oscillator, I sampled off the transmitter output. Procedure was to press the key, wait about three seconds, and record the reading.

-----  
Date: Sun, 15 Sep 2002 13:49:23 -0700  
From: "Dave Martin" <k2zu@seanet.com>  
To: "qrp-l" <qrp-l@lehigh.edu>  
Subject: [135083] Re: AD8302 (network analyser on a chip)  
Message-ID: <000301c25cf9\$611b8200\$b0a32640@davemartin>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Leon. I am interested in the network analyzer application of the chip and would like to hear your opinion after you have had time to play . Thanks.  
Dave K2ZU

-----  
Date: Sun, 15 Sep 2002 20:57:27 GMT  
From: wo7t@juno.com  
To: qrp-l@lehigh.edu  
Subject: [135084] Etchant Resist  
Message-ID: <20020915.135801.19716.174863@webmail3.wlv.unttd.com>

Is there any good household materials that will serve as a good etchant resist for a small very basic circuit board I must make. I seem to recall finger nail polish?

72,  
Mark



W07T

-----  
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-----  
Date: Sun, 15 Sep 2002 17:08:39 -0400

From: "John J. McDonough" <wb8rcr@arrl.net>

To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>

Cc: <wo7t@juno.com>

Subject: [135085] Re: Etchant Resist

Message-ID: <003501c25cfc\$1185f1a0\$010044c0@chartermi.net>

MIME-Version: 1.0

Content-Type: text/plain;

charset="Windows-1252"

Content-Transfer-Encoding: 7bit

Sharpie markers, of course, are the classic. Seems like most other markers don't do it, but even with a Sharpie, you need a good, thick line. I can't imagine that nail polish wouldn't work, but it seems like it would be difficult to control where it went. Any sort of paint or coating that wouldn't dissolve in the etchant, of course, would do, but you got to solve the problem of putting it where you want, and only where you want.

72/73 de WB8RCR <http://www.qsl.net/wb8rcr>

didileydadidah QRP-L #1446 Code Warriors #35

----- Original Message -----

From: <wo7t@juno.com>

To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>

Sent: Sunday, September 15, 2002 4:57 PM

Subject: Etchant Resist

> Is there any good household materials that will serve as  
> a good etchant resist for a small very basic circuit board  
> I must make. I seem to recall finger nail polish?

Date: Sun, 15 Sep 2002 17:03:15 -0400  
From: "Bill, N4QA" <n4qa@hotmail.com>  
To: qrp-l@lehigh.edu  
Subject: [135086] Cleveland...er, I mean, Rock-Mite ROCKS! A day in the life (LONG)  
Message-ID: <F115m6pUpbaWxKxUlZi00007563@hotmail.com>  
Mime-Version: 1.0  
Content-Type: text/plain; format=flowed

Rolled outta bed at 4:30 am...couldn't sleep no mo'.  
Fed Ellie, our 5-yr-old Springer...  
Me & Ellie went to work on the Rock-Mite-20...  
Took lots of breaks during the day:  
ME & Ellie drove out to the blacktop to secure the Sunday paper fer Martha while she was fixin' up a mess o' grits! Ellie made me play tug-o'-war with her upon our return. With Ellie, that is :)  
Worked on the RM sum mo'.  
Me & Ellie took a nap in the LA-Z-BOY while Martha went grocery shoppin'.  
Martha gets home...me & Ellie inventory the new eats...  
Hey, there was PIZZA in there...had to partake...  
Worked on the RM sum mo'.  
Stopped to watch Mike Vick(former VA TECH Hokie) lead the Falcons for a while.  
Finished the RM!  
Borrowed 9V batt & its connector hickey from the Vectronics VEC-1140 DC receiver.  
Borrowed coax connector from DSW-30.  
Found genuine Heathkit headphones in a heap of other stuff...found headphone jack in a parts drawer.  
Scraped up a few test leads, jumpers etc...  
Wow! The Rock-Mite-20's receiver is plenty hot and absolutely nothing heard except CW sigs around 14060 kHz...but wait!  
When I laid a finger on top of Y1, I got Jimmy Buffett doin' 'Come Monday' followed by the Kingston Trio's rendition of 'Tijuana Jail' !!!  
Retracted said finger and...only CW again...NEAT! I like a multi-band rig :)  
BTW, receiver 'tests' done using 250-ft end-fed 17-gauge solid-aluminum 'longwire' antenna. Heathkit QRP tuner atop fencepost, 8-ft groundrod buried directly beneath.  
Using TS-440S as sweep generator with 0dBm output into Cantenna, 3dB down(by ear) ~3 kHz EACH SIDE o' zero.  
Now, this '9V' battery was runnin' 8.0V on receive...  
Put the RM in 'straight key mode'...keyed down...voltage dropped to around 7 volts and the WM-2 read 65 milliwatts( was connected to the dummy(Bill) load during xmit tests)...say!... QRPp!  
Keyer also checked out FB as did 'reverse pair'...  
Listenin' to the RM with the DSW-20...sounds mighty sweet...  
The freq has been real busy all day which is great...may try fer a Q a little later...

I know I'm fergettin' sumpin' but I just can't remember WHAT!

DIDIDIDIT DIDAW DIDAWDAW!

Hey! I really dig this radio...best 25 bux I ever let go of!

73.

Bill, N4QA

<http://www.qsl.net/n4qa/>

ps

Due to spam countermeasures, I see responses via this list's archives and via personal contacts list only.

---

Join the world s largest e-mail service with MSN Hotmail.

<http://www.hotmail.com>

-----  
Date: Sun, 15 Sep 2002 21:05:33 +0000

From: jacksonharbor@att.net

To: qrp-l@lehigh.edu

Subject: [135087] LTC1799 VFO wave file

Message-ID: <20020915210533.NURD3050.mtiwmhc23.worldnet.att.net@mtiwebc08>

Gang -

After reading the post from Dave Benson on the LTC1799 and possible phase noise problems of the RCO (Resistor Controlled Oscillator ;) I tried the part again on a solderless breadboard. Grounded the div pin and connected a 15k ohm resistor to the +5V supply. I then tried listening to the carrier on the K2 at about 6584 KHz. It sounds more like a new digital mode than a carrier, hear for yourself:

<<http://jacksonharbor1.home.att.net/ltc1799.wav>> about 220K in size

I also tried hooking the output up to the SSS counter and noticed that when the counter was gated, the frequency would drop about 500 Hz - this may be why Datak has the CMOS buffer on the output of the ltc1799.

The botton line: Dave Benson is correct as usual ;)

Best Regards,

Chuck Olson, WB9KZY

Jackson Harbor Press

<http://jacksonharbor.home.att.net/>

-----  
Date: Sun, 15 Sep 2002 16:17:01 -0500  
From: "Tim, N9PUZ" <n9puz@arrl.net>  
To: <wo7t@juno.com>,  
Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [135088] Re: Etchant Resist  
Message-ID: <200209152118.QAA29864@gallium.eosinc.com>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="US-ASCII"  
Content-Transfer-Encoding: quoted-printable

On Sun, 15 Sep 2002 20:57:27 +0000 (GMT), wo7t@juno.com wrote:  
>Is there any good household materials that will serve as a good  
>etchant resist for a small very basic circuit board I must make.=  
I  
>seem to recall finger nail polish?

Mark,

I was told, but have not confirmed myself, that the ink used in=  
the "Sharpie" brand permanent markers will resist etching. It=  
would be easy enough to try on a small scrap.

Tim, N9PUZ  
<http://www.qsl.net/n9puz>

-----  
Date: Sun, 15 Sep 2002 16:23:52 -0500  
From: Nick Kennedy <nkennedy@tcainternet.com>  
To: "'wo7t@juno.com'" <wo7t@juno.com>,  
Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [135089] RE: Etchant Resist  
Message-ID: <01C25CD4.48267FE0.nkennedy@tcainternet.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"  
Content-Transfer-Encoding: 7bit

Nail polish would probably be good.

For simple boards, I used to like to use those little bitty jars of model airplane paint. I'd put it on with inexpensive artists paint brushes. Liked that better than resist pen lines because they had a tendency to wash away before etching was complete. If two lines accidentally touched,

it was easy to take a knife and scrape away a border between them. The paint scrapes off easily but doesn't wash off in the etchant bath.

72--Nick, WA5BDU

-----Original Message-----

From: wo7t@juno.com [SMTP:wo7t@juno.com]  
Sent: Sunday, September 15, 2002 3:57 PM  
To: Low Power Amateur Radio Discussion  
Subject: Etchant Resist

Is there any good household materials that will serve as a good etchant resist for a small very basic circuit board I must make. I seem to recall finger nail polish?

72,  
Mark  
W07T

---

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Date: Sun, 15 Sep 2002 17:40:05 -0400  
From: Tom Mc <tjmc@erols.com>  
To: david.sarra@paonline.com  
Cc: Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>  
Subject: [135090] Re: Galena doesn't work!  
Message-ID: <3D84FE35.757E4A3A@erols.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

> but it may make a difference if you break the lump open  
> and expose the interior,

I scratch off an edge with a knife to expose a new section ( no finger prints plse too), then use a piece of steel wire ( guitar, small gauge ) to rub on the crystal.

Tom aa2vk

--

```
*****
*   Member of NORCAL, NJQRP, LIQRP, HFPAck  *
*               K2 #1213                      *
* LIQRP Web Page: www.erols.com/tjmc/liqrp *
*   Personal web page : www.erols.com/tjmc  *
*****
```

-----

Date: Sun, 15 Sep 2002 18:19:12 -0400  
From: Chuck Ludinsky <cjl@mitre.org>  
To: neqrp@jonal.net, qrp-l@lehigh.edu  
Cc: k16ds@dph.dpol.net, k1lgq@dennis.mv.com  
Subject: [135091] QRP Afield - Clarification of Multi-Club Station rule.  
Message-ID: <3D850760.FAC6AD37@mitre.org>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=iso-8859-1  
Content-Transfer-Encoding: quoted-printable

The "multi-club station" rule was confusing from the start, and attempts to clarify it apparently only made it worse. So, let's see if this rewrite is any better. There was no intention to prohibit several QRP'ers from getting together at a common location and working the event. I believe the intent was to avoid having multiple stations (read transmitters) operating simultaneously under the same call.

Please let me know if you have any comments/suggestions regarding the rewritten version below.

72/Chuck

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(Revised) Specifics for this year=92s contest are:

-----  
Date: Saturday, 21 September 2002  
-----

Time:

Best six hour contiguous period during 11:00 AM EDT to 11:00 PM EDT. You may work throughout the entire 12 hour period and select your best six hour period.  
-----

Exchange:

NE-QRP members: RST, State/province/country, NE-QRP Number

Non members: RST, State/province/country, Power

-----  
Bands and Modes:

160M, 80M, 40M, 20M, 15M, 10M.

Any mode (CW, SSB, AM, PSK, etc.); all count the same.

Only one contact per station per mode per band.

Standard QRP frequencies are recommended within each band (or generally accepted frequencies for those modes for which there are no specific QRP frequencies). But, please, let's spread out a little -- not everyone within a kilohertz of 14.060.

-----  
Scoring:

1 point per QRO (above 5 watts) contact from a permanent location.

2 points per QRO contact from a field/mobile location.

5 points per QRP (5 watts or less) contact from a permanent location.

10 points per QRP contact from a field/mobile location.

All contacts must be made from single power/location category (i.e., the category is to remain the same once selected).

Plus: Count QSOs (once per band) with WQ1RP as THREE (3) contacts, subject to scoring above (e.g., a QRP field operator will score each legitimate WQ1RP contact as 30 points).

Final score will be the total number of contacts (including each WQ1RP contact counted as three) multiplied by the power/location category multiplied by the SPC multiplier (see below).

-----  
Multipliers:

Each S/P/C worked counts for one multiplier point and can be counted only ONCE PER BAND.

-----  
Submission of Results:

Email your scoresheet with a copy of the contest log (noting the six hour period that you select for scoring) and (please) any comments/photos concerning your setup, location, experiences, etc., no later than 15 October, to: K1CL@arrl.net





10M: \_\_\_\_\_

(C) PWR/LOCATION MULTIPLIER: \_\_\_\_\_

[illegible]

-----  
Date: Sun, 15 Sep 2002 18:40:14 -0400  
From: Paul Womble <pwomble1@tampabay.rr.com>  
To: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [135092] Re: QRP Afield - Clarification of Multi-Club Station rule.  
Message-ID: <3D850C4E.4F2A0286@tampabay.rr.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Chuck several of us would like to know multiple transmitters are still out? For our group having 2 transmitters, on different bands, provides the maximum op time for everyone.

Paul K4FB

-----  
Date: Sun, 15 Sep 2002 17:41:40 -0500  
From: "Bob Mason" <skydive@runswithscissors.us>  
To: <qrp-l@lehigh.edu>  
Subject: [135093] RE: [Elecraft] Bag for K1  
Message-ID: <NFBBLFFOILIDGGKFDNEBOEPECIAA.skydive@runswithscissors.us>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

OK.... Looks good..... but..... now where do you put the beer ?

Bob WB8CAC  
<http://www.runswithscissors.us>

-  
-----  
End of QRP-L Digest 2679

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